

## REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed April 25, 2007. Upon entry of this response, claims 1-20 remain pending.

### I. Rejections Under 35 U.S.C. §102

#### A. Claim 1 is Allowable Over *Raleigh*

The Office Action indicates that claim 1 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,463,096 ("*Raleigh*"). Applicants respectfully traverse this rejection on the grounds that *Raleigh* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 1 recites:

A method comprising:

storing a description of a first frame wherein said description comprises:

- (1) a frame length; and
- (2) a first transmission rate;

receiving a first portion of said first frame wherein the ***length of said first portion is less than said frame length*** and is based on said first transmission rate;

queuing said first portion of said first frame;

transmitting said first portion of said first frame at said first transmission rate into a shared-communications channel; and

receiving a second portion of said first frame after said transmission of said first portion has started.

***(Emphasis Added)***

The Office Action alleges that *Raleigh* teaches "receiving a first portion of said first frame wherein the ***length of said first portion is less than said frame length*** and is based on said first transmission rate" as recited in claim 1 (page 3, paragraph 1). However, *Raleigh* appears to disclose "a series of frames in the time domain. A frame is here understood to be a unit of time" (col. 6, lines 40-42). Furthermore, *Raleigh* discloses "[I]n an A frame, 15 CPEs are scheduled to transmit, each transmitting at 2 Mbps at differing center frequencies." (col. 6, lines 63-64).

First, the "CPEs" (Customer Premises Equipment) disclosed in *Raleigh* are not "portions" of the frame, as recited in claim 1, but instead are data from different sources allocated to individual "center-frequencies" within the frame. Second, even assuming, for the sake of argument, that "CPEs" correspond to "portions" of the frame, "CPEs" are allocated to individual "center-frequencies" but all CPEs have the same length as the entire frame.

Applicants respectfully submit that this is not the same as "a first portion of said first frame wherein the length of said first portion is less than said frame length and is based on said first transmission rate" as recited in claim 1. For at least this reason, Applicants respectfully request the rejection of claim 1 be withdrawn.

In addition, the Office Action alleges that *Raleigh* discloses "transmitting said first portion of said first frame at said first transmission rate into a shared-communications channel" as recited in claim 1 (page 3, paragraph 3). However, *Raleigh* appears to disclose "a request access (RA) frame is where individual CPEs may request access to the common transmission medium" (col. 6, lines 43-46). Thus, a request access frame is a particular frame wherein devices allocate their data for transmission. Applicants submit that this is not the same as "transmitting said first portion of said first frame at said first transmission rate **into a shared-communications channel**" For at least this additional reason, Applicants respectfully request the rejection of claim 1 be withdrawn.

**B. Claim 5 is Allowable Over Raleigh**

The Office Action indicates that claim 5 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,463,096 ("*Raleigh*"). Applicants respectfully traverse this rejection on the grounds that *Raleigh* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 5 recites:

A apparatus comprising:

an interface controller for:

- (1) receiving a first portion of a first frame; and
- (2) receiving a second portion of a first frame;

a memory for:

- (1) storing a description of said first frame wherein said description comprises a frame length and a first transmission rate; and
- (2) queuing said first portion of said first frame wherein the size of said queue is based on said first transmission rate and the time required to receive said first portion; and

a transmitter for transmitting said first portion of said first frame at said first transmission rate into a shared communications channel.

**(Emphasis Added)**

The Office Action alleges that *Raleigh* teaches "queuing said first portion of said first frame wherein the **size of said queue is based on said first transmission rate and the time required to receive said first portion**" as recited in claim 5 (page 4, paragraph 5). However, *Raleigh* appears to disclose a "process [that] receives packets from the IP router that are

directed to the hub and queues them" (col. 6, lines 28-30). Raleigh does not disclose "wherein the **size of said queue is based on said first transmission rate and the time required to receive said first portion**" for at least the reason that the queue receives "packets from the IP router" and not "said first portion of said first frame", as recited in claim 5. Therefore, the size of the queue cannot be "based on said first transmission rate **and the time required to receive said first portion.**" For at least this reason, Applicants respectfully request the rejection of claim 5 be withdrawn.

**C. Claim 10 is Allowable Over Raleigh**

The Office Action indicates that claim 10 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,463,096 ("*Raleigh*"). Applicants respectfully traverse this rejection on the grounds that *Raleigh* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 10 recites:

A method comprising:

storing a first description wherein said first description comprises:

(1) a first frame length; and

(2) a first transmission rate;

transmitting a queued portion of a first frame at said first transmission rate into a shared-communications channel;

removing said queued portion of said first frame wherein said removal is based on said first frame length;

storing a second description wherein said second description comprises:

(1) a second frame length; and

(2) a second transmission rate;

queuing a first portion of a second frame **wherein the length of said first portion is less than said second frame length** and is based on said first transmission rate; and

transmitting said first portion of said second frame at said second transmission rate into said shared-communications channel.

**(Emphasis Added)**

The Office Action alleges that *Raleigh* teaches "queuing a first portion of a second frame **wherein the length of said first portion is less than said second frame length** and is based on said first transmission rate" as recited in claim 10 (page 6, paragraph 1). However, *Raleigh* appears to disclose "a series of frames in the time domain. A frame is here understood to be a unit of time" (col. 6, lines 40-42). Furthermore, *Raleigh* discloses "[i]n an A frame, 15 CPEs are scheduled to transmit, each transmitting at 2 Mbps at differing center frequencies." (col. 6, lines 63-64).

First, the "CPEs" (Customer Premises Equipment) disclosed in *Raleigh* are not "portions" of the frame, as recited in claim 10, but instead are data from different sources allocated to individual "center-frequencies" within the frame. Second, even assuming, for the sake of argument, that "CPEs" correspond to "portions" of the frame, "CPEs" are allocated to individual "center-frequencies" but all CPEs have the same length as the entire frame. Applicants respectfully submit that this is not the same as "a first portion of a second frame **wherein the length of said first portion is less than said second frame length** and is based on said first transmission rate" as recited in claim 10. For at least this reason, Applicants respectfully request the rejection of claim 10 be withdrawn.

**D. Claim 13 is Allowable Over Raleigh**

The Office Action indicates that claim 13 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,463,096 ("*Raleigh*"). Applicants respectfully traverse this rejection on the grounds that *Raleigh* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 13 recites:

An apparatus comprising:

a memory for:

(1) storing a first description wherein said first description comprises a first frame length and a first transmission rate;

(2) storing a second description wherein said second description comprises a second frame length and a second transmission rate; and

(3) queuing **a first portion of a second frame wherein the length of said first portion is less than said second frame length and is based on said first transmission rate;**

a transmitter for:

(1) transmitting a queued portion of a first frame at said first transmission rate into a shared-communications channel; and

(2) transmitting said first portion of said second frame at said second transmission rate into said shared communications channel; and

a processor for removing said first description and said queued portion of said first frame wherein said removal is based on said first frame length.

**(Emphasis Added)**

The Office Action alleges that *Raleigh* teaches "queuing a first portion of a second frame **wherein the length of said first portion is less than said second frame length** and is based on said first transmission rate" as recited in claim 13 (page 9, paragraph 1). However, *Raleigh* appears to disclose "a series of frames in the time domain. A frame is here understood to be a unit of time" (col. 6, lines 40-42). Furthermore, *Raleigh* discloses "[i]n an A frame, 15

CPEs are scheduled to transmit, each transmitting at 2 Mbps at differing center frequencies." (col. 6, lines 63-64).

First, the "CPEs" (Customer Premises Equipment) disclosed in *Raleigh* are not "portions" of the frame, as recited in claim 13, but instead are data from different sources allocated to individual "center-frequencies" within the frame. Second, even assuming, for the sake of argument, that "CPEs" correspond to "portions" of the frame, "CPEs" are allocated to individual "center-frequencies" but all CPEs have the same length as the entire frame. Applicants respectfully submit that this is not the same as "a first portion of a second frame **wherein the length of said first portion is less than said second frame length** and is based on said first transmission rate" as recited in claim 13. For at least this reason, Applicants respectfully request the rejection of claim 13 be withdrawn.

E. **Claim 17 is Allowable Over Raleigh**

The Office Action indicates that claim 17 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,463,096 ("*Raleigh*"). Applicants respectfully traverse this rejection on the grounds that *Raleigh* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 17 recites:

A method comprising:

storing a first description of a first frame wherein said first description comprises:

- (1) a first frame length;
- (2) a first transmission rate; and
- (3) a **first class of service** with which said first frame is

associated;

queuing a first portion of said first frame in a first queue **wherein said first portion of said first frame comprises m octets**, wherein m is a positive integer, and wherein the value of m is based on said first transmission rate;

transmitting said first portion of said first frame at said first transmission rate into a shared-communications channel;

receiving a second portion of said first frame after said transmission of said first portion has started;

storing a second description of a second frame after said storing of said first description wherein said second description comprises:

- (1) a second frame length;
- (2) a second transmission rate; and
- (3) said second class of service with which said second frame is

associated;

queuing a portion of said second frame wherein said portion of said second frame comprises n octets, wherein n is a positive integer, and wherein the value of n is based on said second transmission rate; and

transmitting said portion of said second frame at said second transmission rate into said shared-communications channel.  
(**Emphasis Added**)

The Office Action alleges that *Raleigh* teaches "a first class of service with which said first frame is associated" as recited in claim 17 (page 8, paragraph 6). However, *Raleigh* appears to disclose "data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates, and frame times" (col. 6, lines 12-16). Even assuming, for the sake of argument, that "frame times" correspond to "a first frame length" and "data rates" correspond to "a first transmission rate", as recited in claim 17, "transmission center frequencies" are not "a first class of service". For at least this reason, Applicants respectfully request that the rejection of claim 17 be withdrawn.

In addition, the Office Action alleges that *Raleigh* teaches "a first portion of said first frame in a first queue **wherein said first portion of said first frame comprises m octets**, wherein m is a positive integer, and wherein the value of m is based on said first transmission rate" as recited in claim 17 (page 8, paragraph 7). However, *Raleigh* appears to disclose "FIG. 4A shows a series of frames in the time domain. A frame is here understood to be a unit of time" (col. 6, lines 40-42). Furthermore, *Raleigh* discloses "[I]n an A frame, 15 CPEs are scheduled to transmit, each transmitting at 2 Mbps at differing center frequencies." (col. 6, lines 63-64).

First, the "CPEs" (Customer Premises Equipment) disclosed in *Raleigh* are not "portions" of the frame, as recited in claim 17, but instead are data from different sources allocated to individual "center-frequencies" within the frame. Second, even assuming, for the sake of argument, that "CPEs" correspond to "portions" of the frame, "CPEs" are allocated to individual "center-frequencies". Applicants respectfully submit that this is not the same as "a first portion of said first frame in a first queue **wherein said first portion of said first frame comprises m octets**, wherein m is a positive integer, and wherein the value of m is based on said first transmission rate" as recited in claim 17. For at least this additional reason, Applicants respectfully request the rejection of claim 17 be withdrawn.

**F. Claims 2-4, 6-9, 11-12, 14-16, and 18-20 are Allowable Over *Raleigh***

The Office Action indicates that claims 2-4, 6-9, 11-12, 14-16, and 18-20 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 6,463,096 ("*Raleigh*"). Applicants respectfully traverse this rejection on the grounds that *Raleigh* does not

disclose, teach, or suggest all of the claimed elements. More specifically, dependent claims 2-4 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 1. Dependent claims 6-9 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 5. Dependent claims 11-12 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 10. Dependent claims 14-16 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 13. Dependent claims 18-20 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 17. *In re Fine, Minnesota Mining and Mfg.Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

### CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and Official Notice, or statements interpreted similarly, should not be considered well-known for the particular and specific reasons that the claimed combinations are too complex to support such conclusions and because the Office Action does not include specific findings predicated on sound technical and scientific reasoning to support such conclusions.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

  
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